REMARKS

Claims 1-24 are pending. Claims 1-3, 5-6, 10, 12, 14, 16-18 and 20-21 are amended herein. No new matter is added as a result of the claim amendments. Support for the claim amendments can be found at least on page 14, lines 15-22, of the instant application.

Claim Objections

Claim 6 is objected to for the reasons stated in the instant Office Action. Applicant respectfully disagrees that Claim 6 conflicts with aspects of the instant specification.

35 U.S.C. § 103 Rejections

Claims 1-2, 5-11, 14-17 and 20-24

The instant Office Action states that Claims 1-2, 5-11, 14-17, and 20-24 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Frink (U.S. Patent No. 6,134,607) in view of Applicant's Admitted Prior Art (AAPA).

Applicant has reviewed the cited references and respectfully submits that Claims 1-2, 5-11, 14-17, and 20-24 are neither anticipated nor rendered obvious by Frink and AAPA, alone or in combination.

Frink appears to describe a "permission-to-read signal" and a "permission-to-write signal." Frink also appears to describe a "read limit pointer" and a "write limit pointer." According to Frink, when a permission-to-read signal is received, the receiver can read up to the write limit pointer; and when a permission-to-write signal is received, the receiver can write up to the read limit pointer.

Significantly, according to Frink as understood by the Applicant, the permission-to-read signal is decoupled from the write limit pointer – that is, they are different signals, and one signal does not trigger the occurrence of the other signal. The permission-to-write signal and the read limit pointer are similarly decoupled.

Thus, for example, it appears according to Frink that a spurious permission-to-read signal can be sent without a write limit pointer. Applicant does not speculate on the consequences of this occurring; Applicant merely points out that Frink does not appear to be able to detect or protect against a spurious permission-to-read or permission-to-write signal.

In contrast, embodiments in accordance with the present claimed invention provide the capability to respond properly to a spurious interrupt signal. According to the present claimed invention as recited in independent Claims 1, 10 and 16, a search of buffers is halted if the search did not find any unprocessed data. More specifically, according to the present claimed invention as recited in dependent Claims 6, 14 and 21, a search of buffers is halted if the software buffer index is equal to the initialized software buffer index (the claimed "reference value"). Applicant respectfully submits that Frink does not show or suggest these claimed features.

Applicant also respectfully submits that AAPA does not overcome the shortcomings of Frink. Specifically, Applicant respectfully submits that Frink and AAPA, alone or in combination, do not show or suggest "when a software buffer index points to a first buffer containing processed data, synchronizing said software buffer index to a hardware buffer index by sequentially searching through

a plurality of buffers containing data to determine whether there is a second buffer with unprocessed data; and if there is said second buffer with unprocessed data, resetting said software buffer index to a next available buffer having processed data following said second buffer, and otherwise stopping said searching when each buffer of said plurality of buffers has been searched and a buffer with unprocessed data is not found" as recited in independent Claim 1 (emphases added) and as similarly recited in independent Claims 10 and 16.

Furthermore, Applicant respectfully submits that Frink and AAPA, alone or in combination, do not show or suggest "when said software buffer index points to said first buffer containing processed data, using a value of said software buffer index corresponding to said first buffer as a reference value; incrementing said software buffer index as each buffer of said plurality of buffers is searched, wherein when said software buffer index reaches one end of a range of possible values it is reset to the other end of said range; and stopping said searching when said software buffer index reaches said reference value without finding a buffer in said plurality of buffers with unprocessed data" as recited in Claim 6 (emphases added) and as similarly recited in Claims 14 and 21.

In summary, Applicants respectfully submit that the basis for rejecting independent Claims 1, 10 and 16 under 35 U.S.C. § 103(a), and the basis for rejecting Claims 2, 5-9, 11, 14-15, 17 and 20-24 (dependent on Claim 1, 10 or 16) under 35 U.S.C. § 103(a), are traversed and that these claims are in condition for allowance.

Claims 3 and 18

The present Office Action states that Claims 3 and 18 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Frink and AAPA in view of Cromer et al. ("Cromer;" U.S. Patent No. 5,860,001).

Applicant has reviewed the cited references and respectfully submits that Claims 3 and 18 are neither anticipated nor rendered obvious by Frink, AAPA and Cromer, alone or in combination.

Claim 3 is dependent on Claim 1 and recites additional limitations, and Claim 18 is dependent on Claim 16 and recites additional limitations. As presented above, Applicant respectfully submits that Frink and AAPA, alone or in combination, do not show or suggest the limitations of Claims 1 and 16.

Applicant further submits that Cromer does not overcome the shortcomings of Frink and AAPA. That is, Applicant respectfully submits that Cromer, alone or in combination with Frink and AAPA, does not show or suggest the limitations of independent Claims 1 and 16 that are cited above, and as such Claims 1 and 16 are considered allowable over Frink, AAPA and Cromer.

Because Claims 3 and 18 depend on Claim 1 or 16 and recite additional limitations, Applicant respectfully submits that the basis for rejecting Claims 3 and 18 under 35 U.S.C. § 103(a) is traversed and that Claims 3 and 18 are also considered allowable.

Claims 4, 13 and 19

The present Office Action states that Claims 4, 13 and 19 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Frink and AAPA in view of Chen et al. ("Chen;" U.S. Patent No. 6,470,463).

Applicant has reviewed the cited references and respectfully submits that Claims 4, 13 and 19 are neither anticipated nor rendered obvious by Frink, AAPA and Chen, alone or in combination.

Claim 4 is dependent on Claim 1 and recites additional limitations, Claim 13 is dependent on Claim 10 and recites additional limitations, and Claim 19 is dependent on Claim 16 and recites additional limitations. As presented above, Applicant respectfully submits that Frink and AAPA, alone or in combination, do not show or suggest the limitations of Claims 1, 10 and 16.

Applicant further submits that Chen does not overcome the shortcomings of Frink and AAPA. That is, Applicant respectfully submits that Chen, alone or in combination with Frink and AAPA, does not show or suggest the limitations of independent Claims 1, 10 and 16 that are cited above, and as such Claims 1, 10 and 16 are considered allowable over Frink, AAPA and Chen.

Because Claims 4, 13 and 19 depend on Claim 1, 10 or 16 and recite additional limitations, Applicant respectfully submits that the basis for rejecting Claims 4, 13 and 19 under 35 U.S.C. § 103(a) is traversed and that Claims 4, 13 and 19 are also considered allowable.

Claim 12

The present Office Action states that Claim 12 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Frink and AAPA in view of "Introduction to Computer Systems."

Applicant has reviewed the cited references and respectfully submits that the Claim 12 is neither anticipated nor rendered obvious by Frink, AAPA and "Introduction to Computer Systems," alone or in combination.

Claim 12 is dependent on Claim 10 and recites additional limitations. As presented above, Applicant respectfully submits that Frink and AAPA, alone or in combination, do not show or suggest the limitations of Claim 10.

Applicant further submits that "Introduction to Computer Systems" does not overcome the shortcomings of Frink and AAPA. That is, Applicant respectfully submits that "Introduction to Computer Systems," alone or in combination with Frink and AAPA, does not show or suggest the limitations of independent Claim 10 that are cited above, and as such Claim 10 is considered allowable over Frink, AAPA and "Introduction to Computer Systems."

Because Claim 12 depends on Claim 10 and recites additional limitations, Applicant respectfully submits that the basis for rejecting Claim 12 under 35 U.S.C. § 103(a) is traversed and that Claim 12 is also considered allowable.

Conclusions

In light of the amendments and arguments presented herein, Applicant respectfully requests reconsideration of the rejected claims.

Based on the arguments presented above, Applicant respectfully asserts that Claims 1-24 overcome the rejections of record. Therefore, Applicant respectfully solicits allowance of these claims.

The Examiner is invited to contact Applicant's undersigned representative if the Examiner believes such action would expedite resolution of the present Application.

Respectfully submitted,

Wagner Murabito & Hao LLP

Date: _11/27/06_

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John P. Wagner, Jr.
Reg. No.: 35,398

Two North Market Street
Third Floor
San Jose, California 95113